

## Research Director's Report

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Sakue Yamada

### New timeline for detector activities

For the newly formed detector Executive Board, the first task in the past month was to work out a new timeline under the present financial difficulties. The plan is to maintain the momentum of the detector community. We need to keep the process which began with the Letter of Intent (LOI) procedure toward the integration of various R&D efforts and ideas into an optimised detector design for the ILC. The financial condition imposes limitations on our speed, but we do not pause. The Global Design Effort also is determined and has worked hard to set up a realistic new plan. A key condition for us is to proceed in synchronisation with this GDE timeline. In particular, in order to communicate efficiently with the accelerator team about machine-detector interface (MDI) matters, a well coordinated pace is required. The new detector plans prepared in consultation with the Organizing Committee of the Worldwide Study of Physics and Detectors for Future Linear e+e- Colliders (WWS-OC) were discussed at the last ILCSC meeting on 11 February at DESY and were

approved.

The purpose of the LOI procedure has been revised to define technical designs of detectors which will be integrated with the accelerator design and to plan the completion of the ongoing R&D efforts. The changes of the procedure are the due date, which is shifted by half a year to end of March 2009. Furthermore, instead of the selection of two LOIs, all submitted LOIs will go through a process of validation by the International Detector Advisory Group (IDAG). This group will examine the detectors in terms of physics performance and the capability of the research groups to conduct the necessary studies.

The shift of half a year is considered adequate to provide more preparation time under the present situation while at the same time to maintain motivation. By avoiding the selection, we may expect better cooperation among LOI groups, for instance on R&D activities. If there are too many LOIs, a certain limitation may be necessary for effective machine-detector interface studies. One could then give preference on contrasted technologies or physics capabilities.

Our new timeline proceeds with two phases corresponding to those of the GDE. The Detector Design Phase-I spans till 2010. We will focus on R&D in prioritised areas and critical elements, and proceed to the initial technical design work for the validated detector specifications. At the same time, groups will update physics performance. Detailed studies of machine-detector interface will be pursued during this period.

The following two years, till 2012, will be called the Detector Design Phase-II. We expect that some results from the Large Hadron Collider experiments will be known at an early stage, to which we need to adapt. The design work should confirm the physics performance based on that knowledge when available. Necessary R&D will have to be completed during this period. Our final goal is to complete the detector technical designs which can be included in ILC project proposal, showing their physics capability and feasibility. This requires completion of MDI technical design and reliable costing. We may wish to prepare for the financial planning of the detector construction.

Soon, we will call for Expressions of Interest (EOI) from the groups which plan to prepare Letters of Intent. It is desirable to identify these possible LOI groups in the near future and the due date for EOIs is set for the end March of this year. Then we will be able to start organising the physics and detector board and our common activities.

-- Sakue Yamada



The ILCSC approved the new detector plans during their meeting this week.